REMARKS

In the non-final Office Action, the Examiner objected to the specification; made a prior restriction requirement final and withdrew claims 25-39 and 42-46 from consideration; rejected claim 8 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite; rejected claims 1-24, 40, and 41 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter; and rejected claims 1, 16, and 17 under 35 U.S.C. § 103 as allegedly being unpatentable over Agrawal et al. (U.S. Patent No. 6,546,389) in view of Edlund et al. (U.S. Patent No. 6,546,388). The Examiner objected to claims 2, 5, 12, 20, 22, and 41 as dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include the features of the base claim and any intervening claims.

By this Amendment, Applicants cancel claims 25-39 and 42-46 without prejudice or disclaimer, amend claims 1, 3, 8, 16, 17, and 40 to improve form, and add new claims 47 and 48. Claims 1-24, 40, 41, 47, and 48 are pending. Applicants appreciate the Examiner's identification of allowable subject matter, but respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 112, 101, and 103.

OBJECTION TO THE SPECIFICATION

On the Office Action Summary page, the Examiner objected to the specification. The Examiner provided no explanation of why the objection was given. If the Examiner persists with the objection to the specification, Applicants respectfully request that the Examiner explain the basis for the objection.

REJECTION UNDER 35 U.S.C. § 112

In paragraph 4 of the Office Action, the Examiner rejected claim 8 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Applicants respectfully traverse the rejection.

The Examiner alleged that the recitation "when the likelihood of the training data when the model includes the rule is greater than when the model does not include the rule" is unclear (Office Action, paragraph 4). Applicants have amended claim 8 to recite "when a likelihood of the training data occurring when the current model includes the new rule is greater than when the current model does not include the new rule." Applicants submit that this language is properly supported by the specification at, for example, paragraph 0042, and is clear and definite.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 8 under 35 U.S.C. § 112, second paragraph.

REJECTIONS UNDER 35 U.S.C. § 101

In paragraphs 6-8 of the Office Action, the Examiner rejected claims 1-24, 40, and 41 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The Examiner alleged that independent claims 1 and 40 appear to be directed to an abstract idea rather than a practical application of the idea since no tangible result appears to occur; that independent claim 16 appears to be directed to a system of software alone, which is functional descriptive material per se; and that independent claim 17 does not appear to be seeking to patent the elements of the system and their interconnection, but instead appear to be seeking to patent programmed functionality of the elements of the system. Applicants respectfully traverse the rejection.

The USPTO specifically states, in the "Interim Guidelines for Examination of Patent

Applications for Patent Subject Matter Eligibility" (Nov. 22, 2005 O.G. Notice) (hereinafter

"Guidelines"), the following:

> To properly determine whether a claimed invention complies with the statutory invention
> requirements of 35 U.S.C. 101, USPTO personnel must first identify whether the claim
> falls within at least one of the four enumerated categories of patentable subject matter
> recited in section 101 (process, machine, manufacture or composition of matter).
>
> * * *
>
> The burden is on the USPTO to set forth a <u>prima facie</u> case of unpatentability. Therefore
> if the examiner determines that it is more likely than not that the claimed subject matter
> falls outside all of the statutory categories, the examiner must provide an explanation. ...
> If the examiner can establish a <u>prima facie</u> case that a claim does not fall into a statutory
> category, that does not preclude complete examination of the application for satisfaction
> of all other conditions of patentability. The examiner must further continue with the
> statutory subject matter analysis as set forth below.

Despite this clear obligation, the Examiner failed to make a determination of whether claims 1,

16, 17, and 40 fall within one of the four enumerated categories of patentable subject matter

recited in Section 101. Applicants respectfully submit that each of independent claims 1, 16, 17,

and 40 falls within one of the four enumerated categories of patentable subject matter recited in

Section 101.

For example, independent claim 1 is directed to a method for forming and outputting

search results. Thus, claim 1 is directed to a "process," which is one of the four enumerated

categories of patentable subject matter recited in Section 101.

Independent claim 16 is directed to a system for forming and outputting search results.

Thus, claim 16 is clearly directed to a "machine," which is also one of the four enumerated

categories of patentable subject matter recited in Section 101.

Independent claim 17 is directed to a system that comprises a repository and a server.

Thus, claim 17 is clearly directed to a "machine," which is one of the four enumerated categories

of patentable subject matter recited in Section 101.

Independent claim 40 is directed to a method for generating and outputting search results. Thus, claim 40 is directed to a "process," which is one of the four enumerated categories of patentable subject matter recited in Section 101.

In light of the foregoing reasons, Applicants submit that the rejection of claims 1-24, 40, and 41 under 35 U.S.C. § 101 is improper.

Furthermore, even assuming, arguendo, that claims 1-24, 40, and 41 are not directed to one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. § 101, the Guidelines further state:

> While abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. In evaluating whether a claim meets the requirements of section 101, the claim must be considered as a whole to determine whether it is for a particular application of an abstract idea, natural phenomenon, or law of nature, rather than for the abstract idea, natural phenomenon, or law of nature itself.

A proper analysis under 35 U.S.C. § 101 entails a determination of whether the claimed invention is a practical application of an abstract idea, law of nature, or natural phenomenon (judicial exceptions to 35 U.S.C. § 101). Independent claims 1, 16, 17, and 40 recite a practical application because they provide a transformation of an article to a different state or thing. The Guidelines state that if a claim provides a transformation or reduction of an article to a different state or thing, then the Examiner shall end the inquiry and find that the claim meets the statutory requirement of Section 101.

For example, independent claims 1 and 16 recite that search results are formed, thus transforming a collection of documents into a set of search results relating to a search query. Independent claim 17 recites that documents are ranked, thus transforming a collection of

documents into a ranked set of documents corresponding to a search query. Independent claim 40 recites that search results are generated, thus transforming a collection of documents into a set of search results relating to a search query.

In light of this, Applicants submit that the rejection under 35 U.S.C. § 101 is again improper for claims 1-24, 40, and 41.

Even assuming, arguendo, that claims 1-24, 40, and 41 do not provide a transformation, claims 1-24, 40, and 41 provide a practical application that produces a useful, tangible, and concrete result. According to the Guidelines, in determining whether a claim provides a practical application that produces a useful, tangible, and concrete result, the Examiner should consider and weigh the following factors: (1) the USPTO's official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible; (2) the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing; and (3) the process must have a result that can be substantially repeatable or the process must substantially produce the same result again.

Claims 1-24, 40, and 41 provide a useful result in that each of the independent claims recites outputting search results or ranked documents. Such a result is useful because it provides meaningful information relating to a search query. Claims 1-24, 40, and 41 produce a tangible result in the form of search results or ranked documents. The results of claims 1-24, 40, and 41 are also concrete because they may be repeated.

In light of this, Applicants submit that the Examiner's rejection of claims 1-24, 40, and 41 under 35 U.S.C. § 101 is improper for the further reason that claims 1-24, 40, and 41 provide

a practical application that produces a useful, tangible, and concrete result.

Based upon the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-24, 40, and 41 under 35 U.S.C. § 101.

REJECTION UNDER 35 U.S.C. § 103

In paragraph 9 of the Office Action, the Examiner rejected claims 1, 16, and 17 under 35 U.S.C. § 103(a) as allegedly unpatentable over Agrawal et al. in view of Edlund et al. Applicants respectfully traverse the rejection.

Amended claim 1, for example, is directed to a method comprising creating a ranking model that predicts a likelihood that a document will be selected; training the ranking model using a data set that includes approximately tens of millions of instances; identifying documents relating to a search query; scoring the documents based, at least in part, on the ranking model; forming search results for the search query from the scored documents; and outputting the search results.

Neither Agrawal et al. nor Edlund et al., whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 1. For example, Agrawal et al. and Edlund et al. do not disclose or suggest training a ranking model using a data set that includes approximately tens of millions of instances. The Examiner alleged that Agrawal et al. provides a synthetic data generator and a training set containing millions of records and cited column 6, lines 56-63, of Agrawal et al. for support (Office Action, page 6). Applicants disagree.

At column 6, lines 56-63, Agrawal et al. discloses:

> For instance, in one experiment using a synthetic data generator and a training set of 100,000 records, the true age value for any particular original record could not be known, with 95% confidence, within an interval any smaller than 60 years. Nonetheless, the

classifier generated by the above-disclosed reconstruction and decision tree logic very accurately resembled a similar classification model generated using the original data as a control.

In this section, Agrawal et al. discloses a synthetic data generator and a training set of 100,000 records. Even assuming, for the sake of argument, that the 100,000 records of the training set disclosed in Agrawal et al. can be equated to instances of a data set (a point that Applicants do not concede), Agrawal et al. only discloses a training set of one hundred thousand records, not approximately tens of millions, as would be required by claim 1. Therefore, Agrawal et al. does not disclose or suggest training a ranking model using a data set that includes approximately tens of millions of instances, as required by claim 1. Edlund et al. also does not disclose or suggest this feature of claim 1.

For at least these reasons, Applicants submit that claim 1 is patentable over Agrawal et al. and Edlund et al., whether taken alone or in any reasonable combination.

Amended claim 16 is directed to a system comprising means for receiving a search query; means for identifying documents relating to the search query; means for ranking the documents based, at least in part, on a ranking model trained on a large data set that includes approximately millions of features; means for forming search results for the search query from the ranked documents; and means for outputting the search results.

Neither Agrawal et al. nor Edlund et al., whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 16. For example, Agrawal et al. and Edlund et al. do not disclose or suggest means for ranking the documents based, at least in part, on a ranking model trained on a large data set that includes approximately millions of features. The Examiner did not address this feature and, therefore, did not establish a prima facie case of obviousness with regard to claim 16.

For at least these reasons, Applicants submit that claim 16 is patentable over <u>Agrawal et al.</u> and <u>Edlund et al.</u>, whether taken alone or in any reasonable combination.

Amended claim 17 is directed to a system comprising a repository configured to store information corresponding to a plurality of prior searches; and a server configured to receive a search query from a user, identify documents corresponding to the search query, rank the identified documents based, at least in part, on a ranking model that includes rules that maximize a likelihood of the repository, and output the ranked documents.

Neither <u>Agrawal et al.</u> nor <u>Edlund et al.</u>, whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 17. For example, <u>Agrawal et al.</u> and <u>Edlund et al.</u> do not disclose or suggest a server to rank identified documents based, at least in part, on a ranking model that includes rules that maximize a likelihood of a repository that stores information corresponding to a plurality of prior searches. The Examiner did not address these features and, therefore, did not establish a prima facie case of obviousness with regard to claim 17.

For at least these reasons, Applicants submit that claim 17 is patentable over <u>Agrawal et al.</u> and <u>Edlund et al.</u>, whether taken alone or in any reasonable combination.

NEW CLAIMS

New independent claim 47 recites features similar to features recited in claim 2, which was identified by the Examiner as allowable. Therefore, claim 47 should be in condition for immediate allowance by the Examiner.

New independent claim 48 recites features similar to features recited in claim 41, which was identified by the Examiner as allowable. Therefore, claim 48 should be in condition for

immediate allowance by the Examiner.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of pending claims 1-24, 40, 41, 47, and 48.

As Applicants' remarks with respect to the Examiner's rejections overcome the rejections, Applicants' silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, etc.) is not a concession by Applicants that such assertions are accurate or that such requirements have been met, and Applicants reserve the right to dispute these assertions/requirements in the future.

If the Examiner does not believe that all pending claims are now in condition for allowance, the Examiner is urged to contact the undersigned to expedite prosecution of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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